

RUELLIA JIMULCENSIS (ACANTHACEAE), A NEW SPECIES FROM THE CHIHUAHUA DESERT AREA, MEXICO

JOSÉ A. VILLARREAL Q.

Departamento de Botánica

Universidad Autónoma Agraria "Antonio Narro"
Buenavista, Saltillo, Coahuila 25315, MEXICO

ABSTRACT

Ruellia jimulcensis Villarreal sp. nov., from the Jimulco mountains area (southwestern Coahuila and northeast Durango), is described and illustrated. It is similar to *R. occidentalis* (Gray) Tharp and Barkley, and recognized by its relatively smaller flowers, shorter corolla basal tube and its distribution.

RESUMEN

Ruellia jimulcensis Villarreal sp. nov. del área de las montañas de Jimulco (suroeste de Coahuila y noreste de Durango), es descrita e ilustrada. Es similar a *R. occidentalis* (Gray) Tharp y Barkley, y se reconoce por sus flores más pequeñas, tubo basal de la corola más corto y su distribución.

KEY WORDS: Acanthaceae, *Ruellia*, Coahuila, Flora of México.

Ruellia, a tropical and subtropical genus of about 200 species is represented in the Chihuahuan Desert Region by six species (Henrickson & Johnston, in press). A new species is proposed as part of the study of the Flora of Coahuila.

Ruellia jimulcensis Villarreal, sp. nov. (Fig. 1). TYPE: MEXICO. COAHUILA: Mpio. Torreón, Sierra de Jimulco, mina San José, vereda hacia la cima, 103°13' W, 25°08' N. Matorral con *Bonetiella anomala*, *Agave lechuguilla*, *Acacia berlandieri*, *Flourensia*, *Hechtia*, *Spiraea* y *Aralia*, 1800–1850 m, 10 Ago 1994, J.A. Villarreal Q. 7781 y M.A. Carranza. (HOLOTYPE: MEXU; ISOTYPES: ANSM, ENCB, TEX).

Ruellia occidentalis (Gray) Tharp & Barkley similis sed differt flores plus brevis, corolla tubis plus brevis, calyx lobis longius quam corolla tubis; flores cleistogamous absens et differt distributio.

Perennial herb from clustered fibrous roots; stems erect to ascending 30–50 cm tall, densely glandular pubescent with straight hairs about 1 mm long; the internodes 4–10 cm long; leaves with petioles 6–30 mm long, blades broadly ovate to obovate, 3–10 cm long, 2–8 cm broad, the base obtuse to rounded, briefly decurrent along the petiole, apex obtuse to acute, the margin entire to undulate-crisped, both surfaces viscid with abundant glandular hairs, the dried leaves usually green-yellowish; flowers in dichasia and terminal thyrsoid panicles 5–20 cm long, to 10 cm broad, strongly

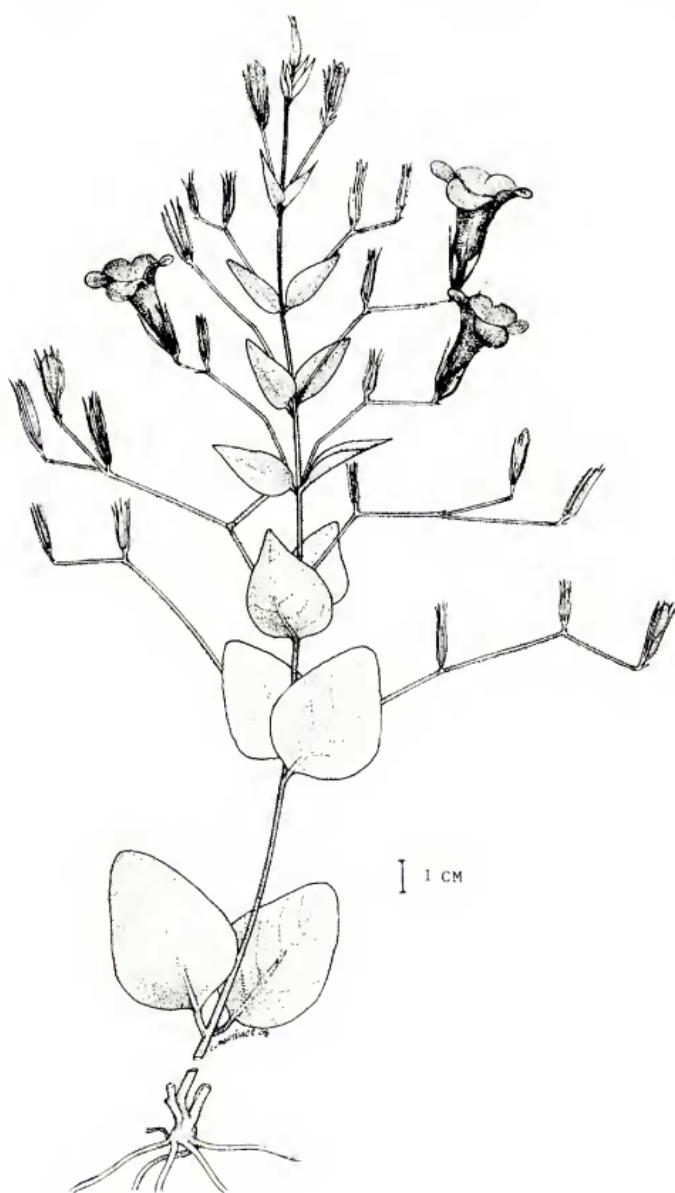


FIG. 1. *Ruellia jimulcensis*, a complete plant.

glandular-pubescent; peduncles ascending; calyx lobes 15–25 mm long, linear attenuate, united at the very base, 1.0–1.2 mm broad at the base, unequal, strongly glandular pubescent; corolla funneliform, bluish-purple 30–40 mm long, the basal tube 8–12 mm long, the broadly campanulate throat 15–20 mm long, the lobes 8–14 mm long, almost as broad, erose; cleistogamous flowers absent; stamens didynamous, borne at the distal portion of the corolla tube, free filaments 4–10 mm long; anthers 3–4 mm long; style 15–20 mm long; fruit ellipsoid 12–20 mm long, 3–4 mm broad, glandular pubescent; seeds 10–12, circular to oblate, 2.0–3.0 mm long, narrowly winged to the apex, brownish, covered with dense appressed trichomes.

Additional specimens examined: MEXICO. Coahuila: Mpio. de Torreón, Sierra de Jimulco, proximidades al ejido Trinidad, 25° 08' N, 103° 22' W, Matorral de *Agave lechuguilla*, *Bouteloua* *ramosa*, *Caesalpinia sessiliflora*, *Jatropha* y *Yucca*, ladera rocosa, 1900–2000 m, 25 Ago 1983, J.A. Villarreal 4387, M.A. Carranza y A. Rodríguez (ANSM); Sierra de Jimulco, mina San José, 25° 08' N, 103° 13' W, Matorral desértico, 1800–1850 m, 11 Oct 1993, M.A. Carranza 1951 y J. Noriega (ANSM); ca. 54 air km SSE of Torreon in canyon above Estacion Otto in SW side of Sierra de Jimulco near Mina San Jose, in limestone area with *Acacia*, *Celtis*, *Viguiera*, *Parthenium*, *Jatropha*, *Trixis*, *Fouquieria*, *Yucca*, 25° 04' N, 103° 13' W, 1850 m, 12 Sep 1980, J. Henrickson & P. Bekey 18504 (TEX). Durango: Mpio. de Cuencamé, Sierra El Rosario, camino a la estación de microondas Sapioris, carr. 49, 30 km al SE de Lerdo, 25° 24' N, 103° 43' W, Matorral de *Acacia crassifolia*, *Viguiera stenoloba*, *Bursera* *sclendentalis*, *Opuntia imbricata* y *Fouquieria splendens*, 1750–1800 m, 16 Ago 1991, J.A. Villarreal 6243 y M.A. Carranza (ANSM); Estacion de microondas Sapioris, ca. 30 km SW of Gomez Palacio on Hwy to Durango 25° 24'30" N, 103° 43' W, matorral desértico microfilo, 1400–1500 m, 25 Mar 1973, M.C. Johnston, T.L. Wendl & F. Chiang 10409 (TEX); just SSE of Estacion Microondas Sapioris, about 20 km NW of Estacion Chocolate, 25° 25' N, 103° 43' W, 1450–1500 m, 14 Aug 1973, M.C. Johnston, T.L. Wendl, F. Chiang & J. Henrickson 12210 (TEX); Microondas Sapioris, along cobblestone road which departs from Hwy 40 N of Estacion Chocolate, ca 15 air mi (25 km) W-SW of Torreon, 25° 25' N, 103° 42' W, *Tecoma stans*, *Agave lechuguilla*, *Euphorbia antisyphilitica* and diverse cacti, 1300 m, 30 Jul 1991, M. Mayfield, A. Hempel & A. Jack 1093 (TEX); Mexico Hwy 40, 25 mi SW of Lerdo, 6 nov 1964, D. Fly 251 (TEX); Mpio. de Lerdo, 4 mi southwest of Chocolate, route 31, growing beneath *Prosopis* on clay flat in valley, 23 Jul 1958, D.S. Correll & I.M. Johnston 20008 (TEX); ca. 4 mi SW of Ciudad Lerdo along Hwy 40 to Zacatecas, on limestone hillside with *Larrea*, *Jatropha*, *Acacia*, *Opuntia*, *Agave* etc., 25° 31' N, 103° 32' W, 1200 m, 21 Sep 1978, J. Henrickson & E. Lee 17474 (TEX).

Ruellia jimulcensis is found on sandy hillsides and dry canyons at elevations of 1200–2000 m, in xeric shrublands at the complex of mountains near Sierra de Jimulco and Sierra del Rosario.

The new species has leaf blades broadly ovate, obtuse to rounded at the base as *R. occidentalis* and often with strongly stipitate glandular trichomes covering the stems and inflorescence. It differs in its flowers 3–4 cm long, the basal tube of the corolla 8–12 mm long, the calyx lobes longer than the basal tube, the cleistogamous flowers unknown and its distribution, as marked in the key below. Tharp and Barkley (1949) gave the name *R. occidentalis*

var. *ferrisae* to a specimen from the mountains near Monterrey, Nuevo León which is recognized by Henrickson and Johnston (in press) by this name for the specimens described here. The type specimen from the Monterrey area has oblong-ovovate leaf blades, lacks stipitate glands on stem and leaves and flower dimensions that better fit with *R. nudiflora*, a common species in Monterrey area. The populations of the proposed species grow allopatrically in an isolated area at the southwestern corner of the Chihuahuan Desert Region while most of the related species are distributed in the eastern Sierra Madre Oriental (Turner 1991).

The three species of *Ruellia* previously mentioned can be separated by the following key:

1. Leaf blades ovate to elliptic-ovovate, mostly less than 3 cm wide, sparsely to moderately pubescent; lower internodes puberulent to glabrate *R. nudiflora*
1. Leaf blades broadly ovate to subdeltoid, 4–7(–9) cm wide, usually densely pubescent; lower internodes with abundant stipitate glands 2
2. Flowers (chasmogamous) 4.5–5.5(–6.5) cm long; basal tube of the corolla 2.5–3.5 cm long, longer than the calyx lobes; cleistogamous flowers (smaller than the chasmogamous) frequently located in the lower nodes; se Texas, ne Mexico (e Coah, ne N.L., Tamps, ne Ver.) *R. occidentalis*
2. Flowers 3.5–4.0 cm long; basal tube of the corolla 8–12 mm long, shorter than the calyx lobes; cleistogamous flowers absent; sw Coahuila and ne Durango *R. jimulicensis*

ACKNOWLEDGMENTS

I thank Tom Wendt for the loan of specimens for revision from TEX/LL. The illustration was prepared by Cuauhtemoc González de León.

REFERENCES

HENRICKSON, J. and M.C. JOHNSTON. (in press). A flora of the Chihuahuan Desert region. (*Ruellia*). Los Angeles, California. 2:1151–1155.

THARP, B.C. and E. BARKLEY. 1949. Genus *Ruellia* in Texas. Amer. Midland Nat. 42:1–86.

TURNER, B.L. 1991. Texas species of *Ruellia* (Acanthaceae). Phytologia 71:281–299.